The cost of training community health agent (CHA), a study on unit cost analysis in Tanzania

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Introduction

Tanzania as other African countries faces the challenge of developing human resources as a key ingredient of successful health system functioning. Crisis of developing human resources is one of the factors underlying the poor performance of health system to deliver effective, evidence – based intervention for priority health problem (WHO, 2006).

The shortage of workforce culminated as the barrier to achievement of MDG 4 and 5 in most developing countries in which 148 per 1000 children die before their 5th birthday, and maternal death related to pregnant event is high. This problem in different countries is serious in many instances, among is no enough human capacity to absorb and deploy, resulted from either past investment shortfalls in pre-services training, international migration and career changes among health workers (Kinfu, Y. et al 2009). Africa has 2.3 healthcare workers per 1000 population, compared to Americas, where there are 24.8 healthcare workers per 1000 population (Naicker, S. 2009); Tanzania has 0.02 doctors per 1000 population (World Bank, 2005).

The shortage attracts corporation of lower cadre in provision of health services. The World Health Organization recommends introducing trained CHW to achieve these MDGs (WHO, 2006). Community health workers (CHW) has been experienced all over the world for several decades and there is an amount of evidence showing that they can add significantly to the efforts of improving the health of the population, particularly those setting with the highest shortage of motivated and capable health professionals (WHO, 2006). And the ministry of health aimed to strengthening the community involvement to improve health (Health sector strategic plan III, 2009 -2015).

However, little is known about the unit cost of training CHW. The Ifakara Health Institute, in collaboration with the Colombia University and Tanzania Training College of International Health (TTCIH) launched an experimental study to test the childhood survival impact of deploying a new cadre of paid community health worker, working within community to be known as the Community Health Agent (CHA) in a project known as CONNECT.

The CONNECT aims to test interventions to strengthen the continuum of care from household to hospital and determine the impact on child mortality, particularly newborn mortality. It is also expected to have an impact on maternal mortality. The main intervention is the introduction of a community health worker linked with an emergency referral system. The cadre will link

communities to the health system by providing basic curative and preventive health services, health information, promotion, and referral services.

The study will assist the Tanzanian Ministry of Health and Social Welfare (MOHSW) in testing and costing a model for recruitment, training and deployment of Community Health Agents (CHA) as envisioned in Primary health services development Program.

The intervention is been implemented in three rural district where community healthcare and outreach services have not been developed and health and demographic surveillance system will allow evaluation of impact on mortality. A two-celled trial will test the hypothesis that introducing a community health worker and providing them with the necessary health system supports, including referral will accelerate achievement of MDGs 4 and 5 (http://connectprojecttz.wordpress.com/).

The overall aim of the paper is to estimate costs associated with the training of CHA component of a new policy of the Ministry of Health known as the Primary Health Care Improvement Program. And point out unit training cost that could be used for scaling up the cadre.

This paper analyzes unit cost of developing and training CHA to help in making decision on optimum use of available resources during scaling up, and may enable to make the expenditure on training meet the criteria of cost-benefit and cost-effectiveness.

Methodology

Data for the analysis are from CONNECT project of the Ifakara Health Institute (IHI), Tanzania Training Centre for International Health (TTCIH), pre-service government clinical officer training centre/college and secondary school.

Data were collected through in-depth interviews with CHA trainees at TTCIH and with Principle of public clinical officer training college and secondary school. Also a closes follow up on all costs involved on community sensitization, recruiting, training, material development and printing, supervisory support, non-medical sustenance, medical care and lodging were tracked and recorded.

The analysis included review of the total cost, capital, recurrent financial costs, unit cost and costs per activities. Total program costs were allocated to each type of program items.

The unit training cost was described as a total cost of establishing CHAs per number of CHAs trained. Transport and other costs for going to school and back home are not included in the estimates.

Results

The Connect project deployed 101 CHAs in 50 villages of Rufiji, Ulanga and Kilombero. The implementation was divided into two phases, October 2010 and September 2011 training intake. The analysis was based on the both phases with a total of 101 CHAs.

Table 1: Unit Program Cost

Cost category	Unit cost (USD)	Percentage (%)
Curriculum Development	2.4	0.2
ID cards	1.1	0.1
Meals (9 month)	802.0	50.2
Accommodation	81.5	5.1
Cleaning (9 month)	5.6	0.4
Medical insurance (NHIF)	22.3	1.4
Field allowance (CHA)	114.0	7.1
CHA stipend	268.2	16.8
Tuition allowances	169.2	10.6
Training Facilities and Utilities	131.9	8.3
Unit Cost of training 1 CHA	1598.1	

Table 1 shows various activities of the program and start up costs. The costs are presented in 2011 international dollar. The table shows that, the unit start up cost of the total program items was $1,598 per trainee. Meal costs comprise a large proportion of this training investment which was 50% of all project start up costs. Accommodation facility was 5% and tuition allowances, training facilities and utilities was 19% of the costs. The medical insurance was 1% of the total start up cost.

Table 2: Modeled Training cost based on Clinical officer training centre

Cost category	Unit Cost (USD)	Percentage (%)
Meals to student	419.19	50.3
Accommodation	49.67	6.0
Medical insurance (NHIF)	22.25	2.7
Training fee (Tuition)	228.40	27.4
Field allowance	113.98	13.7
Unit Cost of training 1 CHA	833.49	

Table 2, shows a modeled intervention based on the clinical officer training centre. The result shows that the scale up training cost will be $833.49 per Community health agent (CHA). Meal to student covers a large proportional of training cost which will be 50% of total cost. The tuition fee will be 27%, field allowance 14%, accommodation 6% and medical insurance 3%.

Discussion

This study attempted to analyze the unit the unit cost of training paid community health agent based on the resources and training institution environment in Tanzania.

In training community health agent, the large portion of cost lies on meals and accommodation which is the daily expenditure. Its 56% both in program and modeled scaling up costs, though the differed in amount. The program cost is higher compared to the clinical officer training centre due to the quality of food and residency of the students. In Tanzania Training Centre for International Health student stayed single self contained room for building within the college and rented a house for the rest outside the campus while in clinical officer training centre student stays in the normal dormitories.

This cost will be less as we adopt the clinical officer centre and secondary school model of facilitating student meals at public colleges and schools. The public college and secondary school menu comprised of stiff porridge and beans as main food and rice with meat for a few day in a week.

Conclusion

Given the limited health sector human resources, introducing CHA in a health system is worthwhile as the government commitment to improve community health based on current situation of 0.02 doctors per 1000 population, CHA is an effective way to shift tasks of higher trained cadres and improve maternal and child survival to achieve MDG 4 and 5.

References

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